

**ABSTRACT**

A self-contained system which converts nitrous oxide to a breathable gas mixture of nitrogen and oxygen. In the preferred embodiment of the present invention, a portable system is disclosed wherein liquefied nitrous  
5 oxide is converted to a breathable gas mixture of nitrogen and oxygen. The decomposition occurs over a catalyst bed which is all contained in a small reactor. The invention is useful for underwater, fire fighting and outer space applications.

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